Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	17 October 2022
Team ID	PNT2022TMID14587
Project Name	Project -- Real-Time river Water Quality Monitoring and Control System
Maximum Marks	4 Marks

Technical Architecture:

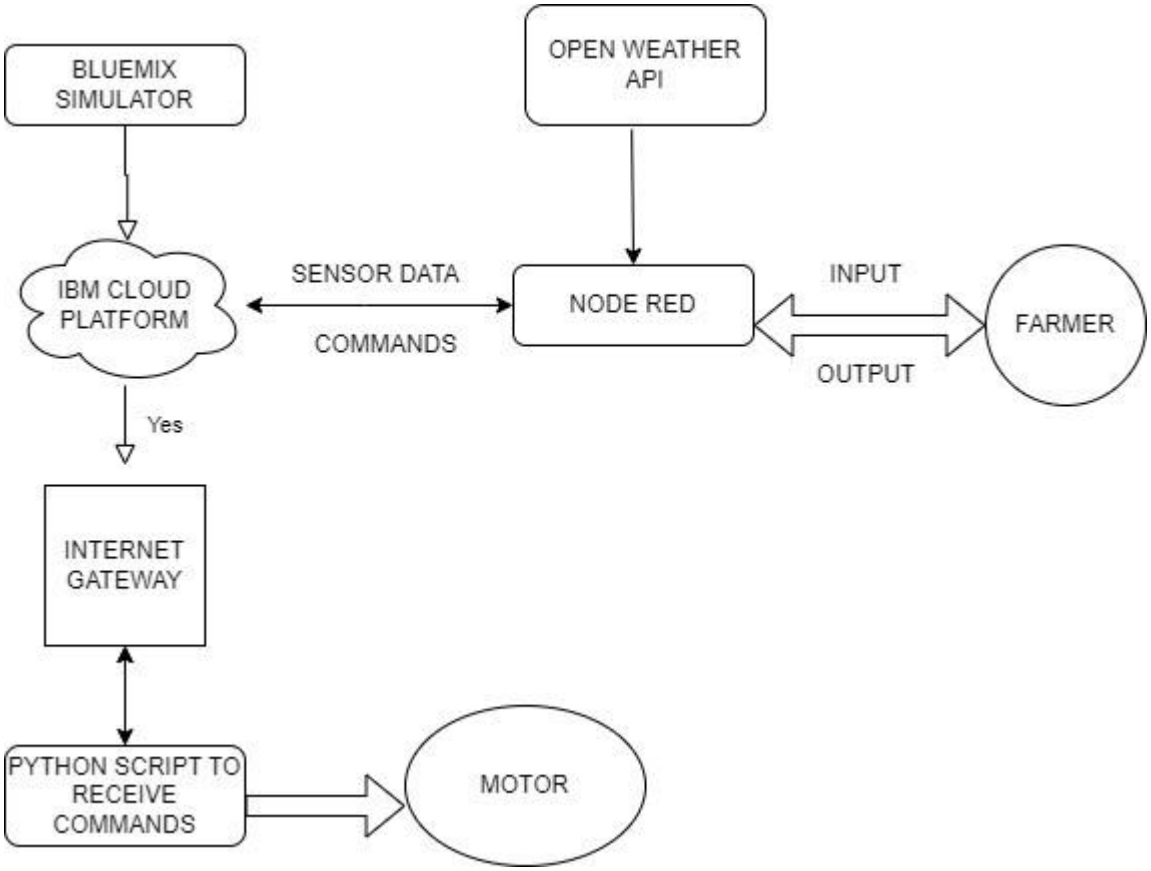
BLUEMIX SIMULATOR
OPEN WEATHER API
IBM CLOUD PLATFORM
SENSOR DATA
COMMANDS
NODE RED
INPUT
OUTPUT
FARMER
Yes
INTERNET GATEWAY
PYTHON SCRIPT TO RECEIVE COMMANDS
MOTOR

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Received data from sensors	The data collected form the sensor units placed in river sides	ESP32 wifi module
2.	Web interface	The collected data were displayed visually	HTML,CSS, javascript
3.	database	datatype	MySQL
4.	Cloud database	Database service on cloud	IBM cloud
5.	Data storage	File storage requirements	IBM Block storage

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	PH level monitoring	The PH level of river water can be monitored via placing sensors in rivers	PH-sensor
2.	Temperature monitoring	The temperature of river water can be monitored	Temperature sensor
3.	Pollution monitoring	The clarity and purity of river water can be monitored	Conductive sensor
4.	Soil level monitoring	The amount of soil mixed in river water can be measured	Turbidity sensor